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Claim Amendments

Please amend claims 1,2,4,6,7,8,9,17

Please cancel claims 5,12,16,19

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LISTING OF CLAIMS

1. (currently amended) An electrochemical plating electrolyte solution, comprising:

an electrolyte bath solution; and

a polymer additive provided in said electrolyte bath solution, said polymer additive comprising polymers having ~~an aromatic monomer and an aromatic amine monomer.~~ a chemical formula of $\text{CH}_3(\text{CH}_2\text{CHX})_m(\text{CH}_2\text{CHYCH}_2)_n\text{CH}_3$, where X is an aromatic functional group; Y is an aromatic amine functional group; and m and n are integers indicating numbers of said aromatic monomer and said aromatic amine monomer, respectively, in said each of said polymers.

2. (currently amended) The electrochemical plating electrolyte solution of claim 1 wherein said aromatic monomer comprises a functional group selected from the group consisting of benzene and ~~pyrrolidone~~ pyrrolidone.

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3. (original) The electrochemical plating electrolyte solution of claim 1 wherein said aromatic amine monomer comprises a functional group selected from the group consisting of imidazole and an imidazole derivative.

4. (currently amended) The electrochemical plating electrolyte solution of claim 3 wherein said aromatic monomer comprises a functional group selected from the group consisting of benzene and ~~pyrrolidone~~ pyrrolidone.

5. (cancelled)

6. (currently amended) The electrochemical plating electrolyte solution of claim ~~5~~ 1 wherein said aromatic functional group comprises a functional group selected from the group consisting of benzene and ~~pyrrolidone~~ pyrrolidone.

7. (currently amended) The electrochemical plating electrolyte solution of claim ~~5~~ 1 wherein said aromatic amine functional group comprises a functional group selected from the group consisting of imidazole and an imidazole derivative.

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8. (currently amended) The electrochemical plating electrolyte solution of claim 7 wherein said aromatic functional group comprises a functional group selected from the group consisting of benzene and ~~pyrellidone~~ pyrrolidone.

9. (currently amended) An electrochemical plating electrolyte solution, comprising:

an electrolyte bath solution; and

a polymer additive provided in said electrolyte bath solution, said polymer additive comprising polymers having ~~an aromatic monomer and an aromatic amine monomer~~ a chemical formula of $\text{CH}_3(\text{CH}_2\text{CHX})_m(\text{CH}_2\text{CHYCH}_2)_n\text{CH}_3$, where X is an aromatic functional group; Y is an aromatic amine functional group; and m and n are integers indicating numbers of said aromatic monomer and said amine monomer, respectively, in said each of said polymers; and a cationic charge density of from about 1 meq/g to about 6 meq/g.

10. (original) The electrochemical plating electrolyte solution of claim 9 wherein said aromatic monomer comprises a

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functional group selected from the group consisting of benzene and pyrrolidone.

11. (original) The electrochemical plating electrolyte solution of claim 9 wherein said aromatic amine monomer comprises a functional group selected from the group consisting of imidazole and an imidazole derivative.

12. (cancelled)

13. (original) The electrochemical plating electrolyte solution of claim 9 wherein each of said polymers has a molecular weight of from about 2,000 to about 400,000.

14. (original) The electroplating electrolyte solution of claim 13 wherein said aromatic monomer comprises a functional group selected from the group consisting of benzene and pyrrolidone.

15. (original) The electroplating electrolyte solution of claim 13 wherein said aromatic amine monomer comprises a

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functional group selected from the group consisting of imidazole and an imidazole derivative.

16. (cancelled)

17. (currently amended) A method of electroplating a metal on an electroplating surface, comprising the steps of:

providing an electrolyte bath solution;

mixing a polymer additive with said electrolyte bath solution, said polymer additive comprising polymers having ~~an aromatic monomer and an aromatic amine monomer~~ a chemical formula of $\text{CH}_3(\text{CH}_2\text{CHX})_m(\text{CH}_2\text{CHYCH}_2)_n\text{CH}_3$, where X is an aromatic functional group; Y is an aromatic amine functional group; and m and n are integers indicating numbers of said aromatic monomer and said amine monomer, respectively, in said each of said polymers;

immersing said electroplating surface in said electrolyte bath solution; and

electroplating said metal onto said electroplating surface.

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18. (original) The method of claim 17 wherein said aromatic monomer comprises a functional group selected from the group consisting of benzene and pyrrolidone and said aromatic amine monomer comprises a functional group selected from the group consisting of imidazole and an imidazole derivative.

19. (cancelled)

20. (original)The method of claim 17 wherein each of said polymers has a molecular weight of from about 2,000 to about 400,000 and a cationic charge density of from about 1 meq/g to about 6 meq/g.